

Claims:

1. A conveyor oven for cooking a food product, comprising:
 - a cooking tunnel comprising:
 - at least one cooking zone, each cooking zone comprising:
 - 5 a housing defining a cooking chamber;
 - a conduit means for circulating gas to and from the cooking chamber;
 - a flow means for causing circulation of the gas;
 - a means for heating the gas;
 - 10 a first gas directing means disposed above the food product; the first gas directing means being operably associated with the conduit means; and
 - a second gas directing means disposed above the food product, the second gas directing means also being operably associated with the conduit means;
 - 15 wherein the first and second gas directing means are configured to cause the gas from the first gas directing means to collide with the gas from the second gas directing means upon the upper surface of the food product; and
 - 20 a conveyor for conveying products through the cooking zone.
2. A conveyor oven for cooking a food product, comprising:
 - a cooking tunnel, comprising:
 - 20 at least one cooking zone, each cooking zone comprising:
 - a housing defining a cooking chamber;
 - a conduit means for circulating gas to and from the cooking chamber;
 - a flow means for causing circulation of the gas;

a means for heating the gas;

a first gas directing means disposed below the food product; the first gas directing means being operably associated with the conduit means; and

a second gas directing means disposed below the food product, the second gas directing means also being operably associated with the conduit means;

wherein the first and second gas directing means are configured to cause the gas from the first gas directing means to collide with the gas from the second gas directing means upon the lower surface of the food product; and

a conveyor for conveying products through the cooking zone.

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3. The oven of claim 1 further comprising :

a first lower gas directing means disposed below the food product; the first lower gas directing means being operably associated with the conduit means; and

15 a second lower gas directing means disposed below the food product, the second lower gas directing means also being operably associated with the conduit means;

wherein the first and second lower gas directing means are configured to cause the gas from the first lower gas directing means to collide with the gas from the second lower gas directing means upon the bottom surface of the food product.

20 4. The oven of any one of claims 1 to 3 wherein each cooking zone cooks the food product independently of the other cooking zones.

5. The oven of any one of claims 1 to 4 further comprising:

a control means for controlling the gas flow.

6. The oven of any one of claims 1 to 5 wherein the gas exits the cooking chamber via the top wall.

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7. The oven of any one of claims 1 to 6 further comprising:
at least one odor filter.

8. The oven of any one of claims 1 to 7 further comprising:

10 a damper means for adjusting the amount of said gas delivered via said conduit means to said first, second, first lower and second lower gas directing means.

9. The oven of any one of claims 1 to 8 wherein the flow means is a blower motor.

10. The oven of claim 9 wherein the blower motor runs at variable speeds.

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11. The oven of any one of claims 1 to 10 wherein the thermal means is a electric resistance heater.

12. The oven of any of the preceding claims wherein the control means is a toggle switch.

20 13. The oven of claim 12 wherein the toggle switch controls the flow means.

14. The oven of any of claims 5 to 11 wherein the control means is a rotary switch.

15. The oven of claim 14 wherein the rotary switch controls the flow means.

16. The oven of any of the preceding claims further comprising:
an electromagnetic source.

17. The oven of claim 16 wherein the control means controls the electromagnetic source, the
5 damper means, the flow means, the thermal means, or combinations thereof.

18. The oven of claim 16 wherein the control means is comprised of toggle switches to
control the electromagnetic source, the damper means, the flow means, the thermal means, or
combinations thereof.

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19. The oven of claim 16 wherein the control means is comprised of rotary switches to
control the electromagnetic source, the damper means, the flow means, the thermal means, or
combinations thereof.

15 20. The oven of claim 16 further comprising:

a control panel for controlling the operation of the electromagnetic source, the damper
means, the flow means, the thermal means, or combinations thereof.

21. An oven as defined in any preceding claim further comprising:

20 an egress opening to allow the gas to exit the cooking chamber and a catalyst located
within said egress opening;

22. The oven of claim 21 wherein said egress opening is located in a top wall of the

cooking chamber.

23. The oven of claim 21 wherein said egress opening is located in a side wall of the cooking chamber.

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24. The oven of claim 21 wherein said egress opening is located in a back wall of the cooking chamber.

25. The oven of claim 21 wherein said egress opening is located in a bottom wall of a
10 cooking chamber.

26. The oven of any of the preceding claims wherein the first gas directing means and the second gas directing means are located within a top wall.

15 27. The oven of any one of claims 1 to 25 wherein the first gas directing means and the second gas directing means are located within the right and left side walls.

28. The oven of any one of claims 1 to 25 wherein the first gas directing means and the second gas directing means are located at the intersection of side walls and a top wall.

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29. The oven of any one of claims 1 to 25 wherein the first gas directing means and the second gas directing means are located within a back wall.

30. The oven of any one of claims 2 to 25 wherein the first lower gas directing means and the second lower gas directing means are located within a bottom wall.

31. The oven of any one of claims 2 to 25 wherein the first lower gas directing means and the
5 second lower gas directing means are located within the right and left side walls.

32. The oven of any one of claims 2 to 25 wherein the first lower gas directing means and the second lower gas directing means are located at the intersection of the side walls and a bottom wall.

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33. The oven of any one of claims 2 to 25 wherein the first lower gas directing means and the second lower gas directing means are located within a back wall.

34. The oven of any one of claims 1 to 33 wherein the thermal means is a heater powered by
15 gaseous fuel.

35. The oven of claim 34 wherein the gaseous fuel is propane.

36. The oven of claim 34 wherein the gaseous fuel is natural gas.

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37. The oven of any preceding claim wherein said oven is a speed cooking oven.

38. The oven of any preceding claim wherein said oven is a conventional cooking oven.

39. The oven of any preceding claim wherein said oven is an accelerated cooking oven.

40. The oven of any preceding claim wherein said oven is a recycling oven.

41. The oven of any preceding claim further comprising:

5 at least two additional gas directing means for direction on at least one further food product.

42. The oven of any preceding claim further comprising:

an ingress door disposed at one end of the cooking tunnel;

10 an egress door disposed at the other end of the cooking tunnel;

a plurality of sealing means carried by the conveyor for providing a seal between the ingress door and the cooking tunnel and between the egress door and the cooking tunnel.

43. The oven of claim 7 wherein the odor filter is a catalytic odor filter.

15 44. The oven of any preceding claim having a bleed gas flow system further comprising:

a gas bleed chamber; and

an odor filter within the gas bleed chamber.

45. The oven of claim 44 wherein the odor filter causes catalytic destruction

20 of cooking by-products.

46. The oven of claim 45 further comprising a pre-heater to heat the bleed gas flow prior to the gas entering the catalytic odor filter.